

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

EVOLVED WIRELESS, LLC,

Plaintiff,

v.

APPLE INC.,

Defendant.

C.A. No. 15-542-SLR

EVOLVED WIRELESS, LLC,

Plaintiff,

v.

HTC CORPORATION and
HTC AMERICA, INC.,

Defendants.

C.A. No. 15-543-SLR

EVOLVED WIRELESS, LLC,

Plaintiff,

v.

LENOVO GROUP LTD.,
LENOVO (U.S.) INC., and
MOTOROLA MOBILITY,

Defendants.

C.A. No. 15-544-SLR

EVOLVED WIRELESS, LLC,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., and
SAMSUNG ELECTRONICS AMERICA,

Defendants.

C.A. No. 15-545-SLR

EVOLVED WIRELESS, LLC,

Plaintiff,

v.

ZTE (USA) INC.,

Defendant.

C.A. No. 15-546-SLR

EVOLVED WIRELESS, LLC,

Plaintiff,

v.

MICROSOFT CORPORATION,
MICROSOFT MOBILE OY, and
NOKIA INC.,

Defendants.

C.A. No. 15-547-SLR

**DEFENDANTS' REPLY BRIEF IN SUPPORT OF
THEIR MOTION FOR JUDGMENT ON THE PLEADINGS**

TABLE OF CONTENTS

I.	Introduction.....	1
II.	Argument	1
A.	<i>Diamond v. Diehr</i> Does Not Save Evolved’s Claims	1
1.	The Claims in <i>Diehr</i> Recited Far More Than Mathematical Operations	1
2.	The ’916 and ’481 Patent Claims Are Invalid Under <i>Benson</i> , <i>Flook</i> , and <i>Diehr</i>	2
B.	Beyond the Mathematical Algorithms, Evolved’s Claims Are Generic.....	6
C.	Evolved’s Claims Preempt the Mathematical Algorithms In the Field of Wireless and Mobile Communications	6
D.	Evolved’s <i>Claims</i> Recite No Patentable Solutions to Practical Problems	7
E.	No Disputed Facts Require Resolution.....	10
III.	Conclusion	10

TABLE OF AUTHORITIES

CASES

<i>Alice Corp. Pty. Ltd. v. CLS Bank Int’l</i> , 134 S. Ct. 2347 (2014)	5, 6, 7, 8, 10
<i>Bicon, Inc. v. Straumann Co.</i> , 441 F.3d 945 (Fed. Cir. 2006)	4
<i>Cybersource v. Retail Decisions, Inc.</i> , 654 F.3d 1366 (Fed. Cir. 2011)	5
<i>DDR Holdings, LLC v. Hotels.com, L.P.</i> , 773 F.3d 1245 (Fed. Cir. 2014)	8
<i>Device Enhancement LLC. v. Amazon.com, Inc.</i> , 2016 WL 2899246 (D. Del. 2016)	7, 8
<i>Diamond v. Chakrabarty</i> , 447 U.S. 303 (1980)	8
<i>Diamond v. Diehr</i> , 450 U.S. 175 (1981)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
<i>Digitech Image Tech. v. Elecs. Imaging Inc.</i> , 758 F.3d 1344 (Fed. Cir. 2014)	4
<i>Enfish, LLC v. Microsoft Corp.</i> , 822 F.3d 1327 (Fed. Cir. 2016)	7, 8
<i>Gottschalk v. Benson</i> , 409 U.S. 63 (1972)	1, 2, 4, 5, 7
<i>In re TLI Commc’ns LLC Patent Litig.</i> , 823 F.3d 607 (Fed. Cir. 2016)	6
<i>McRO, Inc. v. Bandai Namco Games Am. Inc.</i> , 2016 WL 4896481 (Fed. Cir. 2016)	8
<i>OIP Techs., Inc. v. Amazon.com, Inc.</i> , No. C-12-1233 EMC, 2012 WL 3985118 (N.D. Cal. Sept. 11, 2012)	4
<i>Parker v. Flook</i> , 437 U.S. 584 (1978)	1, 2, 4, 5, 6, 7, 10

I. INTRODUCTION

Evolved opposes Defendants’ motion based on several false premises. Defendants did not ignore *Diamond v. Diehr*, 450 U.S. 175 (1981), and *Diehr* does not support patent eligibility here. *Diehr* addressed a claim to a physical and chemical process for curing rubber, and the mathematical equation was only a small portion of the claim. Indeed, the centerpiece of the Court’s rationale was that the claims were drawn to a process for curing rubber and not to the formula itself. By contrast, the ’916 and ’481 patents recite little more than mathematical operations, limited only by a general technological environment and insignificant post-solution activity. That type of claim is patent ineligible even under *Diehr*, which expressly reaffirmed the holdings of *Benson* and *Flook* applied in Defendants’ opening brief. Evolved’s other arguments are similarly erroneous. As such, the claims at issue here are invalid under *Benson*, *Flook*, **and** *Diehr*, and the Court should so hold.

II. ARGUMENT

A. *Diamond v. Diehr* Does Not Save Evolved’s Claims

Evolved asserts that Defendants have ignored the *Diehr* decision and that *Diehr* overturned the *Benson* and *Flook* decisions upon which Defendants rely. (D.I. 87 at 1, 2, 6-9.)¹ Neither assertion is accurate. Defendants cited and relied on *Diehr* three times in their opening memorandum. (D.I. 74 at 1, 2, 18.) More importantly, the Supreme Court in *Diehr* affirmed *Benson* and *Flook* for precisely the reasons Defendants cited them.

1. The Claims in *Diehr* Recited Far More Than Mathematical Operations

The claims at issue in *Diehr* recited “a physical and chemical process for molding precision synthetic rubber products.” *Diamond v. Diehr*, 450 U.S. 175, 184 (1981). The process

¹ Docket entry citations herein refer to the docket for C.A. No. 15-cv-546-SLR-SRF.

involved a series of steps and the use of a mathematical formula known as the Arrhenius equation to control how long the rubber would cure. *Id.* at 177, 187. Beyond the formula, the claim required at least five other steps: “[1] installing rubber in a press, [2] closing the mold, [3] constantly determining the temperature of the mold, [4] constantly recalculating the appropriate cure time through the use of the formula and a digital computer, and [5] automatically opening the press at the proper time.” *Id.* at 187. As the Court noted, the claimed innovation was not the Arrhenius equation itself, but the use of that equation in combination with these five steps. *Id.* at 186-87. Noting that patent protection had historically been available for “[i]ndustrial processes such as this,” and that the claims “involve the transformation of an article, in this case raw, uncured synthetic rubber, into a different state or thing,” the Supreme Court held that the claimed process for curing rubber was patent eligible. *Id.* at 183, 184, 191-92. The Court expressly reaffirmed its prior decisions in *Benson* and *Flook*. *Id.* at 185-187 (footnotes omitted).

Thus, far from overruling *Benson* and *Flook*, *Diehr* applied the same legal principles to different claims. Those claims were directed to an industrial process for curing rubber that happened to employ a mathematical formula in one step of the process. The claims were not drawn to the mathematical formula by itself (*Benson*) or to the mathematical formula limited only to a particular technological environment with insignificant post-solution activity (*Flook*).

2. The '916 and '481 Patent Claims Are Invalid Under *Benson*, *Flook*, and *Diehr*

The claims of the '916 and '481 patents are thus distinguishable from those at issue in *Diehr* and fall squarely under the analysis of *Benson* and *Flook*. As demonstrated in Defendants' opening brief, the putative inventions of the '916 and '481 patents are the mathematical algorithms themselves, unbounded by any patentable restriction. (D.I. 74 at 1, 2, 4-8, 10-14, 18-

20.) Evolved admits as much in its Reply Claim Construction Brief. *See, e.g.*, D.I. 85 at 7, 8 (“the words of the claims connote an algorithm”), 9-10, 12 (“the claimed algorithm”), 14 (“the claim language itself recites an algorithm”), 15. *See*, for example, claim 1 from both the ’916 and ’481 patents with the recited mathematical operations grayed out:

’916 Patent	’481 Patent
<p>1. A method for transmitting a code sequence from a transmitting party to a receiving party in a wireless communication system, the method comprising:</p> <p style="padding-left: 40px;">acquiring a code sequence having a second length by a cyclic extension of a code sequence having a first length;</p> <p style="padding-left: 40px;">performing a circular shift to the code sequence having the second length; and</p> <p style="padding-left: 40px;">transmitting the circular shifted code sequence having the second length to the receiving party,</p> <p style="padding-left: 40px;">wherein the first length is a largest prime number smaller than the second length, and</p> <p style="padding-left: 40px;">wherein the cyclic extension of the code sequence having the first length is performed such that a part of the code sequence having the first length, having a length corresponding to a difference between the first length and the second length, is added to either a start or an end of the code sequence having the first length, and</p> <p style="padding-left: 40px;">wherein the circular shift is performed to the code sequence having the second length such that either a rear portion of the code sequence having the second length moves to a start of the code sequence having the second length, or a front portion of the code sequence having the second length moves to an end of the code sequence having the second.</p>	<p>1. A method of transmitting a preamble sequence in a mobile communication system, the method comprising:</p> <p style="padding-left: 40px;">repeating a specific sequence, having a length (L), N times to generate a consecutive sequence having a length (N*L);</p> <p style="padding-left: 40px;">generating said preamble sequence by concatenating a single cyclic prefix (CP) to a front end of said consecutive sequence; and</p> <p style="padding-left: 40px;">transmitting, on a random access channel, said preamble sequence to a receiving side.</p>

This table shows how little there is to either claim beyond the mathematical operations. These claims are a far cry from the *Diehr* claim, which, in addition to a mathematical formula, recited at least five physical steps of an industrial process for curing rubber. *Diehr*, 450 U.S. at 187.

Of course, the “preamble does not limit claim scope if it ‘merely states the purpose or intended use of an invention,’” which is the case here. *See Digitech Image Tech. v. Elecs. Imaging Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014) (quoting *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 952 (Fed. Cir. 2006)). But even if the preambles were limiting, the only non-mathematical features of claim 1 are the technological environments recited in the preambles and the step of “transmitting” the mathematical output, which is insignificant post-solution activity.

As Defendants argued in their opening brief and the *Diehr* court confirmed, “[a] mathematical formula as such is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.” *Diehr*, 450 U.S. at 191 (emphasis added) (citing *Benson* and *Flook*). Thus, limiting the claims to a “wireless communication system” or a “mobile communication system” does not make them patentable.

Nor does the “transmitting” step confer patentability. As *Diehr* confirmed, “*insignificant postsolution activity* will not transform an unpatentable principle into a patentable process.” 450 U.S. at 191-92 (emphasis added) (citing *Flook*). Transmitting code sequences over a random access channel, or to a receiving party/side, is exactly the type of “insignificant postsolution activity” that cannot transform a mathematical algorithm into patentable subject matter because it is generic functionality that was utterly common in the prior art. (D.I. 74 at 2, 12, 18.) *See OIP Techs., Inc. v. Amazon.com, Inc.*, No. C-12-1233 EMC, 2012 WL 3985118, at *17 (N.D. Cal. Sept. 11, 2012) (“Nor will the post-solution activity of sending a . . . message . . . rescue the claims in the instant case.”), *aff’d*, 788 F.3d 1359 (Fed. Cir. 2015).

The “machine or transformation test,” which is not dispositive anyway, also cannot save Evolved’s claims (Opp. at 17-18) because the claims fail both prongs. The generic recitation of

nonce terms like “code sequence generation unit,” “preamble generation unit,” or “transmitting unit” fail to tie the claims to a specific machine. Even under Evolved’s proposed interpretations, such components represent nothing but “hardware and/or software” for performing mathematical operations or the transmission of data. As the Supreme Court held in *Alice*, “merely requiring generic computer implementation fails to transform that abstract idea into a patent-eligible invention.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2352 (2014). Nor has transformation occurred by merely generating a code sequence from mathematical operations and then transmitting it wirelessly. Such a generation is nothing more than the manipulation of data, which simply does not count. *Cybersource v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) (“The mere manipulation or reorganization of data, however, does not satisfy the transformation prong.”).

Evolved also incorrectly criticizes Defendants for parsing the claims by separating the mathematical operations from the few non-mathematical features, suggesting that *Diehr* precludes such an analysis. Not so. The Supreme Court’s analysis requires consideration of “the elements of each claim both individually and ‘as an ordered combination,’” *Alice*, 134 S. Ct. at 2355, just as Defendants did in their opening brief. (D.I. 74 at 9, 13, 20.)

Evolved points to nothing in the claims that would amount to something more, like the claims in *Diehr*. Nor could it. When looking at the ’916 and ’481 patent claim elements individually or as ordered combinations, they recite nothing more than the application of mathematical formulas to a particular technological environment, which does not “amount[] to significantly more than a patent upon the [ineligible concept] itself,” *Alice*, 134 S. Ct. at 2355,

Far from suggesting the claims at issue here are patent eligible, *Diehr* puts their ineligibility in stark relief. The line the Supreme Court drew between *Benson* and *Flook*, on the

one hand, and *Diehr*, on the other, was between claims that were drawn essentially to mathematical algorithms—though they include generic or insignificant non-mathematical claims elements—and claims drawn to industrial processes that happen to incorporate mathematical algorithms. The latter, as in *Diehr*, are patent eligible. The former, as here, are not.

B. Beyond the Mathematical Algorithms, Evolved’s Claims Are Generic

Evolved also argues that Defendants overgeneralize its claims, but the claims themselves contradict that argument because their only specifics are in the unpatentable mathematical operations. The remainder of the claimed subject matter is non-specific in structure, reciting things like “transmitting party,” “receiving party,” “code sequence generator,” and “transmitting unit.” Evolved cannot evade the reality that these non-specific elements are just like the “telephone unit” and “server” in the *TLI* case, providing only a generic environment in which to carry out the unpatentable mathematical operations.² *See In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016). The non-mathematical claim steps of the ’916 and ’481 patent claims are equally generic, requiring only a single step: transmitting the output of the mathematical algorithm. That is classically insignificant and unpatentable post-solution activity. *See Diehr*, 450 U.S. at 191-92 (citing *Parker v. Flook*, 437 U.S. 584).

C. Evolved’s Claims Preempt the Mathematical Algorithms In the Field of Wireless and Mobile Communications

Evolved also contends that the Court must, under Step 1 of *Alice*, “determine if the claims ‘preclude the risk of preemption,’” citing only an isolated sentence in *Device Enhancement*. (D.I. 87 at 15.) *Alice*, however, does not require specific findings on preemption.

² Evolved also takes Defendants’ comment about the common cold out of context. Defendants did not argue that the ’916 patent claims cover transmission of a common cold. They merely noted that the terms “transmitting party” and “receiving party” by themselves are so generic that they could involve transmission and receipt of anything. (D.I. 74 at 14.)

Alice, 134 S. Ct. at 2355. For example, as this Court noted in *Device Enhancement*, the Federal Circuit’s opinion in *Enfish* did not even address preemption. *Device Enhancement LLC v. Amazon.com, Inc.*, 2016 WL 2899246, at *10 (D. Del. 2016). In any event, *Device Enhancement* explains the preemption concern as one of specificity, *i.e.*, whether the claims are specific enough so that the mathematical algorithm or abstract idea underlying them is sufficiently confined so as not to “‘improperly [tie] up the future use of’ these building blocks of human ingenuity.” *Id.*, 2016 WL 2899246 at *2 (quoting *Alice*, 134 S.Ct. at 2354).

Defendants’ opening brief, and the analysis above, demonstrates that the claims at issue here are anything but specific. (D.I. 74 at 12-14, 16-19.) Beyond the recitation of mathematical operations, they contain only generic components and processes. It also does not matter that the claims “do not wholly preempt the use of mathematical formulas” because they “are limited to generating and transmitting code sequences in a wireless or mobile communication system.” (D.I. 87 at 15.) *Flook* has already foreclosed that argument. 437 U.S. at 589-90.

D. Evolved’s Claims Recite No Patentable Solutions to Practical Problems

Evolved also makes much of the purported solutions its patents provide to supposed problems in mobile communications, but that argument rests on a misunderstanding of the law. Mathematical algorithms are not patent eligible just because they may solve a technical problem. The claims in *Benson*, for example, solved the technical problem of automatically converting data from binary-coded decimal form into pure binary form so that the data could be used by a digital computer, but those claims were still held ineligible. *Gottschalk v. Benson*, 409 U.S. 63, 66-71 (1972). Surely, Einstein’s famous equation, $E = mc^2$, solved a myriad of technical problems, yet it certainly was not patent eligible. *Diehr*, 450 U.S. at 185 (“Likewise, Einstein could not patent his celebrated law that $E = mc^2$.”) (quoting *Diamond v. Chakrabarty*, 447 U.S.

303, 309 (1980)).

Evolved relies on a single sentence from this Court’s opinion in *Device Enhancement* to argue otherwise. (See D.I. 87 at 9.) But nothing in that case sought to overturn the settled law of the Supreme Court; nor could it. Rather, the cited passage of *Device Enhancement* summarized the Federal Circuit’s analysis of *Alice* Step 1, as applied to computer-related innovations in *DDR Holdings* and *Enfish*, not as applied to mathematical operations.³ See *Device Enhancement*, 2016 WL 2899246, at *3-5; *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016).

Moreover, none of the support for the purported “solutions” Evolved identifies in its brief is where it might be relevant—in the *claims*. Allegations of problems or solutions described in Evolved’s complaint or in the patent specifications, even if taken as true, do not make the claims patentable. The claims themselves must recite the solutions. The claims here do not.

The claim in *Diehr*, on which Evolved rests so much of its opposition, recited a specific solution to a practical problem. The problem was the difficulty of predicting the time required to cure different molded-rubber products, which sometimes resulted in overcuring or undercuring the product. *Diehr*, 450 U.S. at 177-78. *Diehr* claimed a solution to this problem, reciting a new

³ Likewise, the Federal Circuit’s recent decision in *McRO* is distinguishable. *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 2016 WL 4896481 (Fed. Cir. 2016). Those claims were directed to a method of 3D animation that used unconventional rules to relate sounds, timing, and image modifications to more accurately animate facial expressions relating to certain basic sounds. *Id.* at *1, 3. Unlike the claims at issue here, the *McRO* claims did not recite any particular mathematical operation. *Id.* at *3. Moreover, it was the combination of the unconventional rules with the other steps of the claimed process that rendered the claims patent eligible. According to the Court, the automated animation technique “goes beyond merely ‘organizing [existing] information into a new form’” and “uses a combined order of specific rules that renders information into a specific format that is then used and applied to create desired results: a sequence of synchronized, animated characters.” *Id.* at *9. Thus, the claims in *McRO* focused “on a specific means or method that improves the relevant technology,” rather than mere mathematical operations combined with generic processes or components, as here.

rubber molding process that involved at least five physical or chemical steps. These claimed steps included repeatedly measuring the temperature inside the mold cavity, feeding this information to a digital computer that constantly recalculated the cure time based on a mathematical formula, and signaling by the computer the right time to open the mold press, all of which Diehr argued were new in the art at the time. *Id.* at 179. The Supreme Court held that Diehr's claim was patent eligible because he recited his solution *in the claim*. *Id.* The mathematical formula was only part of the claim—used to control the timing of the final recited physical step. Only when combined with the other recited steps to provide a specific solution to the identified problem did the mathematical formula become part of a patent-eligible invention.

Evolved argues, for example, that the claimed invention of the '916 patent provides a solution to a specific problem by optimizing the number of unique code sequences, maintaining good cross-correlation properties, decreasing interference, and increasing the number of devices each base station services. (D.I. 87 at 10-11 (citing D.I. 1-1 at 1:31-34, 7:35-44, 8:13-23).) But the cited excerpts from the written description discuss the mathematical properties of different codes, not specific problems or solutions. More important, the '916 patent *claims* say nothing about the number of unique sequences, cross-correlation, interference, or the number of devices. In fact, the claims entirely lack the detail that one might expect to define a specific solution to a practical problem, such as the timing, circumstances, conditions precedent, or means for transmitting the sequence. Unlike the '916 patent claims, the *Diehr* claim recited that type of detail.

Similarly, for the '481 patent, Evolved argues that the invention provides a specific solution for compensating multi-path signal loss, enabling easy identification of user equipment, and allowing for better reception of the transmitted preamble. (D.I. 87 at 11 (citing D.I. 1-5 at

2:37-44, 11:55-67, 12:5-10).) Once again, however, the '481 patent does not *claim* those supposed solutions. The excerpts Evolved cites from columns 11 and 12 purport to describe the manipulation and transmission of OFDM symbols in an LTE system to compensate for multi-path loss and to make it easy to identify user equipment. But the '481 patent *claims* do not even mention LTE systems or OFDM symbols. Instead, they broadly and generically claim mathematical operations followed by transmission of the output. Like the '916 patent claims, the '481 claims entirely lack the detail one might expect to define a specific solution to a practical problem. Limiting the transmission to a particular channel does not narrow the claim to a patentable “solution,” as Evolved argues. *See Diehr*, 450 U.S. at 192 n.14 (“We rejected in *Flook* the argument that because all possible uses of the mathematical formula were not pre-empted, the claim should be eligible for patent protection. Our reasoning in *Flook* is in no way inconsistent with our reasoning here.”). Unlike the far more specific *Diehr* claim, Evolved’s claims are not patent eligible.

E. No Disputed Facts Require Resolution

Finally, Evolved argues, without explanation, that the Court is not permitted to resolve issues raised by Step 2 of *Alice* because it must accept as true the allegations set forth in ¶¶ 24-32, 51-60 of its complaint. (D.I. 87 at 20.) But those allegations relate only to the background technology, not to any practical solutions allegedly recited *in the claims*. As demonstrated above, such allegations cannot save the claims here. *See* Part II.D above. Even accepting those allegations as true, the claims are invalid as patent ineligible, and the Court should so rule.

III. CONCLUSION

For the reasons stated above and in Defendants’ opening brief, the Court should grant the motion for judgment on the pleadings and enter judgment holding the claims of the '916 and '481 Patents invalid under section 101 and dismissing Counts I and V of Plaintiff’s complaints.

Dated: September 29, 2016

OF COUNSEL:

Michael D. Jay
Bill Ward
Joseph E. Lasher
Nandan Padmanabhan
BOIES, SCHILLER & FLEXNER LLP
401 Wilshire Boulevard, Suite 850
Santa Monica, CA 90401
Tel: (310) 752-2400

Steven C. Holtzman
BOIES, SCHILLER & FLEXNER LLP
1999 Harrison Street, Suite 900
Oakland, CA 94612
Tel: (510) 874-1000

OF COUNSEL:

Stephen S. Korniczky
Martin R. Bader
SHEPPARD, MULLIN, RICHTER &
HAMPTON, LLP
12275 El Camino Real
Suite 200
San Diego, CA 92130
(858) 720-8900

OF COUNSEL:

Mitchell G. Stockwell
Richard W. Goldstucker
KILPATRICK TOWNSEND & STOCKTON LLP
1100 Peachtree Street, Suite 2800
Atlanta, GA 30309
Tel: (404) 815-6500

Taylor H. Ludlam
KILPATRICK TOWNSEND & STOCKTON LLP
4208 Six Forks Road, Suite 1400
Raleigh, NC 27609
Tel: (919) 420-1700

Akarsh P. Belagodu
KILPATRICK TOWNSEND & STOCKTON LLP
607 14th Street, NW, Suite 900
Washington, DC 20005
Tel: (202) 508-5800

POTTER ANDERSON & CORROON LLP

By: David E. Moore
David E. Moore (#3983)
Bindu A. Palapura (#5370)
Stephanie E. O'Byrne (#4446)
Hercules Plaza, 6th Floor
1313 N. Market Street
Wilmington, DE 19801
(302) 984-6000
dmoore@potteranderson.com
bpalapura@potteranderson.com
sobyrne@potteranderson.com

Counsel for Defendant Apple Inc.

POTTER ANDERSON & CORROON LLP

By: Philip A. Rovner
Philip A. Rovner (#3215)
Jonathan A. Choa (#5319)
Hercules Plaza
P.O. Box 951
Wilmington, DE 19899
(302) 984-6000

*Counsel for Defendants HTC Corporation and
HTC America, Inc.*

POTTER ANDERSON & CORROON LLP

By: David E. Moore
David E. Moore (#3983)
Bindu A. Palapura (#5370)
Stephanie E. O'Byrne (#4446)
Hercules Plaza, 6th Floor
1313 N. Market Street
Wilmington, DE 19801
(302) 984-6000
dmoore@potteranderson.com
bpalapura@potteranderson.com
sobyrne@potteranderson.com

*Counsel for Defendants Lenovo Group Ltd.,
Lenovo (United States) Inc., and Motorola
Mobility.*

SHAW KELLER LLP

OF COUNSEL:

Kevin P.B. Johnson
Victoria F. Maroulis
Todd M. Briggs
Charles M. Stiernberg
QUINN EMANUEL URQUHART &
SULLIVAN, LLP
555 Twin Dolphin Dr., 5th Floor
Redwood Shores, CA 94065
(650) 801-5100

By: Andrew E. Russell
John W. Shaw (No. 3362)
Karen E. Keller (No. 4489)
Andrew E. Russell (No. 5382)
David M. Fry (No. 5486)
300 Delaware Avenue, Suite 1120
Wilmington, DE 19801
(302) 298-0700
jshaw@shawkeller.com

*Counsel for Samsung Electronics Co., Ltd. and
Samsung Electronics America, Inc.*

RICHARDS, LAYTON & FINGER, P.A.

OF COUNSEL:

Jay H. Reiziss
Natalie A. Bennett
McDERMOTT WILL & EMERY LLP
500 North Capitol Street, N.W.
Washington, D.C. 20001
(202) 756-8000

By: Travis S. Hunter
Kelly E. Farnan (#4395)
Farnan@rlf.com
Travis S. Hunter (#5350)
Hunter@rlf.com
920 N. King Street
Wilmington, Delaware 19801
(302) 651-7700

Counsel for Defendant ZTE (USA) Inc.

Charles M. McMahon
Hersh H. Mehta
McDERMOTT WILL & EMERY LLP
227 West Monroe Street
Chicago, IL 60606
(312) 372-2000

MORRIS, NICHOLS, ARSHT & TUNNELL LLP

OF COUNSEL:

Richard A. Cederoth
SIDLEY AUSTIN LLP
One South Dearborn Street
Chicago, IL 60603
(312) 853-7000

By: Rodger D. Smith II
Rodger D. Smith II (#3778)
Jeremy A. Tigan (#5239)
1201 North Market Street
P.O. Box 1347
Wilmington, DE 19801
(302) 658-9200
rsmith@mnat.com
jtigan@mnat.com

*Counsel for Microsoft Corp., Microsoft Mobile
Oy, and Microsoft Mobile Inc. (f/k/a Nokia
Inc.)*

Ellen S. Robbins
SIDLEY AUSTIN LLP
555 West Fifth Street
Los Angeles, CA 90013
(213) 896-6000

Joseph A. Micallef
Anna M. Weinberg
Wonjoo Suh
SIDLEY AUSTIN LLP
1501 K Street, N.W.
Washington, DC 20005
(202) 736-8000